

## CLAIMS

What is claimed is:

1. A dual band antenna for a wireless communication system,  
5 comprising:  
a conducting surface for radiating and receiving  
electromagnetic signals and having a first cutout part  
and a second cutout part, said first cutout part having  
a length for producing electromagnetic resonance at a  
10 first frequency range, and said second cutout part  
having a length for producing electromagnetic  
resonance at a second frequency range;  
a feed point connected with said conducting surface around  
said first cutout part for feeding signals of said first  
15 frequency range to said first cutout part and for  
feeding signals of said second frequency range to said  
second cutout part; and  
a feed line connected with said conducting surface at said  
20 feed point for feeding signals to said dual band  
antenna.
2. The dual band antenna of claim 1, wherein said first cutout  
part and said second cutout part lie in the same plane of  
said conducting surface.
- 25 3. The dual band antenna of claim 1, wherein said first cutout  
part is on a deflected portion of said conducting plate  
relative to said second cutout part.
- 30 4. The dual band antenna of claim 1, wherein said first cutout  
part and said second cutout part elongate substantially  
in the same direction on said conducting surface.
5. The dual band antenna of claim 1, wherein said feed line

is a coaxial cable.

6. The dual band antenna of claim 5, further comprising a  
grounding location formed on said conducting surface  
5 around said first cutout part whereby said coaxial cable  
is grounded.

7. The dual band antenna of claim 6 further comprising a  
fixation structure disposed on said conducting surface  
10 around said grounding location, said fixation structure  
having a recess receiving said coaxial cable for providing  
precise fixation and grounding of said coaxial cable.

8. The dual band antenna of claim 1, wherein said first cutout  
15 part is rectangular and said second cutout part is  
trapezoidal.

9. A dual band slot antenna for a wireless communication  
system, comprising:  
20 a conducting plate for radiating and receiving  
electromagnetic signals and having a first slot and a  
second slot, said first slot elongating for producing  
electromagnetic resonance at a first frequency range,  
and said second slot elongating for producing  
25 electromagnetic resonance at a second frequency range;  
a feed line connected with said conducting plate around  
said first slot for feeding signals of said first  
frequency range of said first slot and for feeding  
signals of said second frequency range of said second  
30 slot.

10. The dual band slot antenna of claim 9, wherein said first  
slot is on a deflected part of said conducting plate  
relative to said second slot.

11. An antenna structure for a wireless communication system,  
comprising:

5 a conducting plate for radiating and receiving  
electromagnetic signals and having a first opening and  
a second opening, said first opening being rectangular  
for producing electromagnetic resonance at a first  
frequency band, and said second opening being  
10 trapezoidal for producing electromagnetic resonance  
at a second frequency band; and  
a feed line connected with said conducting plate around  
said first opening for feeding signals of said first  
frequency band of said first opening and for feeding  
15 signals of said second frequency band of said second  
opening.

12. The antenna structure of claim 11, wherein said first  
opening is on a deflected part of said conducting plate  
relative to said second opening.

20